

IAP12 Rec'd FCT/PTO 27 APR 2006

SEQUENCE LISTING

<110> KANEKA CORPORATION

<120> NOVEL ACETOACETYL-CoA REDUCTASE AND PROCESS FOR PRODUCING OPTICALLY ACTIVE ALCOHOL

<130> BO30435WO01

<150> JP2003-380987

<151> 2003-11-11

<160> 15

<170> PatentIn version 3.1

<210> 1

<211> 245

<212> PRT

<213> Achromobacter xylosoxidans subsp. denitrificans

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Gly	Cys	Gly	Pro	Ser	Arg	Asn	Tyr	Gln	Gln	Trp	Leu	Asp	Glu	Gln	Ala
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Glu	Ser	Thr	Val	Glu	Ala	Phe	Glu	Arg	Val	Lys	Arg	Asp	Met	Gly	Pro
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Val	Asp	Val	Leu	Val	Asn	Asn	Ala	Gly	Ile	Thr	Arg	Asp	Gly	Leu	Phe
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Arg	Lys	Met	Ser	Ala	Asp	Asp	Trp	Arg	Ala	Val	Ile	Asp	Thr	Asn	Leu
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Gly	Gln	Phe	Gly	Gln	Thr	Asn	Tyr	Ser	Thr	Ala	Lys	Ala	Gly	Ile	His
145					150					155					160

Gly	Phe	Thr	Met	Ala	Leu	Ala	Gln	Glu	Val	Ala	Ser	Lys	Gly	Ile	Thr
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Val	Asn	Thr	Val	Ser	Pro	Gly	Tyr	Ile	Gly	Thr	Asp	Met	Val	Arg	Ala
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195 200 205

Arg Leu Gly Thr Pro Glu Glu Ile Ala Ser Ile Thr Ser Trp Leu Ala
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Gly Leu His Met Gly
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<213> *Achromobacter xylosoxidans* subsp. *denitrificans*

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<222> (1)..(738)

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acc tca att tgc cag cgc ctg gcc aaa gat ggc ttt cgc gtg gtg gca	96
Thr Ser Ile Cys Gln Arg Leu Ala Lys Asp Gly Phe Arg Val Val Ala	
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ggc tgc ggc ccc agc cgc aat tac cag caa tgg ctg gat gaa cag gcg	144
Gly Cys Gly Pro Ser Arg Asn Tyr Gln Gln Trp Leu Asp Glu Gln Ala	
35 40 45	
gcg cag ggc tat acg ttc tac gcg tca gtg ggc aac gtg tcc gat tgg	192
Ala Gln Gly Tyr Thr Phe Tyr Ala Ser Val Gly Asn Val Ser Asp Trp	
50 55 60	
gag tcc acg gta gaa gca ttc gag cgc gtc aag cgg gac atg ggc ccg	240
Glu Ser Thr Val Glu Ala Phe Glu Arg Val Lys Arg Asp Met Gly Pro	
65 70 75 80	
gtc gat gtg ctg gtc aac aac gcg ggc atc acc cgc gac ggc ctg ttc	288
Val Asp Val Leu Val Asn Asn Ala Gly Ile Thr Arg Asp Gly Leu Phe	
85 90 95	
cgc aag atg agc gcc gac gac tgg cgc gcg gtc atc gac acc aac ctg	336
Arg Lys Met Ser Ala Asp Asp Trp Arg Ala Val Ile Asp Thr Asn Leu	
100 105 110	
aac agc ctc ttc aac gtg acc aag cag gtg atc gac gac atg gtc gag	384
Asn Ser Leu Phe Asn Val Thr Lys Gln Val Ile Asp Asp Met Val Glu	
115 120 125	
cgc cag tgg ggc cgc atc gtc aac atc agc tcg gtg aac ggg cag aag	432

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Val	Asn	Thr	Val	Ser	Pro	Gly	Tyr	Ile	Gly	Thr	Asp	Met	Val	Arg	Ala		
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Ile	Arg	Pro	Asp	Val	Leu	Glu	Lys	Ile	Val	Ala	Thr	Ile	Pro	Val	Arg		
		195					200					205					
cgc	ctg	ggc	acg	ccg	gag	gaa	atc	gcg	tcc	atc	acg	tcg	tgg	ctg	gcc	672	
Arg	Leu	Gly	Thr	Pro	Glu	Glu	Ile	Ala	Ser	Ile	Thr	Ser	Trp	Leu	Ala		
	210					215					220						
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Ser	Asp	Glu	Ser	Gly	Phe	Ser	Thr	Gly	Ala	Asp	Phe	Ser	Leu	Asn	Gly		
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 35 40 45
 Lys Ala Leu Gly Phe Asp Phe Ile Ala Ser Glu Gly Asn Val Ala Asp
 50 55 60
 Trp Asp Ser Thr Lys Thr Ala Phe Asp Lys Val Lys Ser Glu Val Gly
 65 70 75 80
 Glu Val Asp Val Leu Ile Asn Asn Ala Gly Ile Thr Arg Asp Val Val
 85 90 95
 Phe Arg Lys Met Thr Arg Ala Asp Trp Asp Ala Val Ile Asp Thr Asn

100					105					110					
Leu	Thr	Ser	Leu	Phe	Asn	Val	Thr	Lys	Gln	Val	Ile	Asp	Gly	Met	Ala
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Asp	Arg	Gly	Trp	Gly	Arg	Ile	Val	Asn	Ile	Ser	Ser	Val	Asn	Gly	Gln
	130					135					140				
Lys	Gly	Gln	Phe	Gly	Gln	Thr	Asn	Tyr	Ser	Thr	Ala	Lys	Ala	Gly	Leu
145					150					155					160
His	Gly	Phe	Thr	Met	Ala	Leu	Ala	Gln	Glu	Val	Ala	Thr	Lys	Gly	Val
				165					170					175	
Thr	Val	Asn	Thr	Val	Ser	Pro	Gly	Tyr	Ile	Ala	Thr	Asp	Met	Val	Lys
			180					185					190		
Ala	Ile	Arg	Gln	Asp	Val	Leu	Asp	Lys	Ile	Val	Ala	Thr	Ile	Pro	Val
		195					200					205			
Lys	Arg	Leu	Gly	Leu	Pro	Glu	Glu	Ile	Ala	Ser	Ile	Cys	Ala	Trp	Leu
	210					215					220				
Ser	Ser	Glu	Glu	Ser	Gly	Phe	Ser	Thr	Gly	Ala	Asp	Phe	Ser	Leu	Asn
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Gly	Gly	Leu	His	Met	Gly										
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Thr Ala Ile Cys Gln Arg Leu Ala Lys Asp Gly Phe Arg Val Val Ala	
20 25 30	
ggt tgc ggc ccc aac tcg ccg cgc cgc gaa aag tgg ctg gag cag cag	144
Gly Cys Gly Pro Asn Ser Pro Arg Arg Glu Lys Trp Leu Glu Gln Gln	
35 40 45	
aag gcc ctg ggc ttc gat ttc att gcc tcg gaa ggc aat gtg gct gac	192
Lys Ala Leu Gly Phe Asp Phe Ile Ala Ser Glu Gly Asn Val Ala Asp	
50 55 60	
tgg gac tcg acc aag acc gca ttc gac aag gtc aag tcc gag gtc ggc	240

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Glu	Val	Asp	Val	Leu	Ile	Asn	Asn	Ala	Gly	Ile	Thr	Arg	Asp	Val	Val		
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ttc	cgc	aag	atg	acc	cgc	gcc	gac	tgg	gat	gcg	gtg	atc	gac	acc	aac		336
Phe	Arg	Lys	Met	Thr	Arg	Ala	Asp	Trp	Asp	Ala	Val	Ile	Asp	Thr	Asn		
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ctg	acc	tcg	ctg	ttc	aac	gtc	acc	aag	cag	gtg	atc	gac	ggc	atg	gcc		384
Leu	Thr	Ser	Leu	Phe	Asn	Val	Thr	Lys	Gln	Val	Ile	Asp	Gly	Met	Ala		
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Asp	Arg	Gly	Trp	Gly	Arg	Ile	Val	Asn	Ile	Ser	Ser	Val	Asn	Gly	Gln		
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Lys	Gly	Gln	Phe	Gly	Gln	Thr	Asn	Tyr	Ser	Thr	Ala	Lys	Ala	Gly	Leu		
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cat	ggc	ttc	acc	atg	gca	ctg	gcg	cag	gaa	gtg	gcg	acc	aag	ggc	gtg		528
His	Gly	Phe	Thr	Met	Ala	Leu	Ala	Gln	Glu	Val	Ala	Thr	Lys	Gly	Val		
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acc	gtc	aac	acg	gtc	tct	ccg	ggc	tat	atc	gcc	acc	gac	atg	gtc	aag		576
Thr	Val	Asn	Thr	Val	Ser	Pro	Gly	Tyr	Ile	Ala	Thr	Asp	Met	Val	Lys		
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gcg	atc	cgc	cag	gac	gtg	ctc	gac	aag	atc	gtc	gcg	acg	atc	ccg	gtc		624
Ala	Ile	Arg	Gln	Asp	Val	Leu	Asp	Lys	Ile	Val	Ala	Thr	Ile	Pro	Val		
			195					200				205					
aag	cgc	ctg	ggc	ctg	ccg	gaa	gag	atc	gcc	tcg	atc	tgc	gcc	tgg	ttg		672
Lys	Arg	Leu	Gly	Leu	Pro	Glu	Glu	Ile	Ala	Ser	Ile	Cys	Ala	Trp	Leu		
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tcg	tcg	gag	gag	tcc	ggg	ttc	tcg	acc	ggc	gcc	gac	ttc	tcg	ctc	aac		720
Ser	Ser	Glu	Glu	Ser	Gly	Phe	Ser	Thr	Gly	Ala	Asp	Phe	Ser	Leu	Asn		
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ggc	ggc	ctg	cat	atg	ggc	tga											741
Gly	Gly	Leu	His	Met	Gly												
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<223> n represents a, t, g or c

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<210> 6
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<210> 9
<211> 28
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<210> 10
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<210> 11
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<210> 13
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<210> 14
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<210> 15
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<220>
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<222> (40)..(778)

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